UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/692,264	10/23/2003	Jon Cargille	MS1-1815US	1567

22801   7590   05/30/2008
LEE & HAYES PLLC
421 W RIVERSIDE AVENUE SUITE 500
SPOKANE, WA 99201

EXAMINER
ANYA, CHARLES E

ART UNIT	PAPER NUMBER
2194	

MAIL DATE	DELIVERY MODE
05/30/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
Office Action Summary	10/692,264	CARGILLE ET AL.
	Examiner	Art Unit	
	Charles E. Anya	2194	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS,
WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>17 March 2008</u>.

2a) ☐ This action is **FINAL**.　　2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>1-13,15-23,25-29,31-38 and 40</u> is/are pending in the application.

　　4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) <u>1-13, 15-23, 25-29,31-38 and 40</u> is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

　　Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

　　Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

　　a) ☐ All　b) ☐ Some * c) ☐ None of:

　　　1. ☐ Certified copies of the priority documents have been received.

　　　2. ☐ Certified copies of the priority documents have been received in Application No. _____.

　　　3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage
　　　　　application from the International Bureau (PCT Rule 17.2(a)).

　　* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail. Date _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

1.   Claims 1-13,15-23,25-29,31-38 and 40 are pending is this application.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2.   Claims 1-3,5-12,15,18,21-23,25 and 27-29,31-38 and 40 are rejected under 35

U.S.C. 102(b) as being anticipated by U.S. Pat. No. 6,157,927 to Schaefer et al.

3.   As to claim 1, Schaefer teaches interfaces, stored on one or more computer-

readable media, to be called on kernel transaction management objects, comprising:

application program interfaces (APIs) to implement operations on a kernel transaction

object (TX) (figure 4D "…ITransaction interface…" Col. 15 Ln. 15 – 33), the TX

representing a transaction the TX being accessible by at least one process participating

in the transaction (Transaction Object 78); and APIs to implement operations on a

kernel resource management object (RMO) (figure 4E "…IResourceManager

interface…" Col. 15 Ln. 51 – 62), the RMO representing a relationship between a TX

associated with the transaction manager and at least one resource that participates in

the transaction (Resource Manager Object 108), the resource being an entity capable of

storing data in a durable state ("…data base…" Col. 12 Ln. 43 – 44, figure 5 "…CRM

record…" Col. 22 Ln. 1 – 67) and APIs to implement operations on a kernel enlistment

(EN) object (figure 4C "…ITransactionEnlistAsync interface and an IPrepareInfo

interface…" Col. 16 Ln. 54 – 67), the EN representing a relationship between a resource

manager and the transaction (Enlistment Object 80).

4.   As to claim 2, Schaefer teaches interfaces according to claim 1, wherein each of

the APIs to implement operations on the TX, the RMO, and the EN utilize a handle to

refer to an object ("…pointer…" Col. 15 Ln. 20 – 33, Col. 22 Ln. 45 – 51).

5.   As to claim 3, Schaefer teaches interfaces according to claim 2, wherein each of

the handles is an opaque reference to a unique object ("…pointer…" Col. 15 Ln. 20 –

33).

6.   As to claim 5, Schaefer teaches interfaces according to claim 2, wherein at least

one of the APIs calls for the TX to transmit a prepare request to resource managers

enlisted in a transaction ("…PrepareRequest…" Col. 16 Ln. 64 – 67).

7.   As to claim 6, Schaefer teaches interfaces according to claim 2, wherein at least

one of the APIs calls for a new TX to be created for a transaction ("…creates…" Col. 15

Ln. 15 – 20).

8.   As to claim 7, Schaefer teaches interfaces according to claim 2, wherein at least

one of the APIs calls for the TX to be opened for a transaction ("…tpconnect…" Col. 12

Ln. 63 – 67, Col. 13 Ln. 11 – 19, Col. 14 Ln. 59 – 67, Col. 25 Ln. 40 – 59).

9.   As to claim 8, Schaefer teaches interfaces according to claim 2, wherein at least

one of the APIs calls for the TX to commit a transaction ("…CommitRequest…" Col. 16

Ln. 18 – 42).

10.   As to claim 9, Schaefer teaches interfaces according to claim 2, wherein at least

one of the APIs calls for the TX to abort a transaction ("…AbortRequest…" Col. 16 Ln.

18 – 42).

11.   As to claim 10, Schaefer teaches interfaces according to claim 2, wherein at least

one of the APIs calls for the TX to save a current state of the transaction ("…commit…"

Col. 13 Ln. 1 – 10, Col. 14 Ln. 35 – 40).

12.   As to claim 11, Schaefer teaches interfaces according to claim 2, wherein at least

one of the APIs calls for the TX to retrieve information about the TX for a requestor

("…GetTransactionInfo method…" Col. 15 Ln. 28 – 31).

13.   As to claim 12, Schaefer teaches interfaces according to claim 2, wherein at least

one of the APIs calls for the TX to set information ("…SetComplete() method…" Col. 25

Ln. 46 – 50).

14.   As to claim 15, Schaefer teaches interfaces according to claim 2, wherein at least

one of the APIs calls for a new RMO to be created ("…created…" Col. 15 Ln. 8 – 17).

15.   As to claim 18, Schaefer teaches interfaces according to claim 2, wherein at least

one of the APIs calls for the RMO to open for a transaction ("…tpconnect…" Col. 12 Ln.

63 – 67, Col. 13 Ln. 11 – 19, Col. 14 Ln. 59 – 67, Col. 25 Ln. 40 – 59).

16.   As to claim 21, Schaefer teaches interfaces according to claim 2, wherein at least

one of the APIs calls for the RMO to set information ("…Enlist method…Reenlist

method…" Col. 15 Ln. 51 – 62).

17.   As to claim 22, Schaefer teaches interfaces according to claim 2, wherein at least

one of the API calls for the RMO to be enlisted on a transaction at least once ("…Enlist

method…" Col. 15 Ln. 51 – 62, Col. 16 Ln. 8 – 17).

18.   As to claim 23, Schaefer teaches interfaces according to claim 2, wherein at least

one of the APIs calls for a notification from a resource manager for the RMO

("…ReenlistmentComplete method…" Col. 15 Ln. 51 – 62).

19.   As to claim 25, Schaefer teaches interfaces according to claim 2, wherein at least
one of the APIs is to implement operations on the TX by the RMO
("…IResourceManager interface…" Col. 15 Ln. 51 – 62).

20.   As to claim 27, Schaefer teaches interfaces according to claim 25, wherein the at
least one of the APIs is to inform the TX that transaction preparation has been
completed by a requested resource manager ("…PrepareRequestDone…" Col. 16 Ln.
16 Ln. 60 – 67).

21.   As to claim 28, Schaefer teaches interfaces according to claim 25, wherein the at
least one of the APIs is to inform the TX that a resource manager has completed rolling
back a transaction ("…AbortRequestDone…" Col. 17 Ln. 1 – 6, Col. 18 Ln. 21 – 25).

22.   As to claim 29, Schaefer teaches interfaces according to claim 25, wherein the at
least one of the APIs is to inform the TX that a resource manager has committed to a
transaction ("…CommitRequestDone method…" Col. 17 Ln. 1 – 3).

23.   As to claim 31, Schaefer teaches interfaces according to claim 2, wherein least
one of the APIs calls for a resource manager to be registered as a communications
resource manager for a particular protocol (Resource Manager 70 Col. 13 Ln. 21 – 28,
Col. 15 Ln. 4 – 8).

24.   As to claim 32, Schaefer teaches interfaces according to claim 2, wherein at least one of the APIs calls for a representation of a transaction to be serialized into a buffer ("…encoding and decoding…" Col. 14 Ln. 50 – 54).

25.   As to claim 33, Schaefer teaches interfaces according to claim 2, wherein at least one of the APIs calls for information representing registered protocols to be serialized into a buffer ("…encoding and decoding…" Col. 14 Ln. 50 – 54).

26.   As to claim 34, Schaefer teaches interfaces according to claim 32, wherein at least one of the APIs calls for a transaction represented by the serialization be made available by a transaction management object ("…encoding and decoding…" Col. 14 Ln. 50 – 54).

27.   As to claim 35, Schaefer teaches interfaces according to claim 2, wherein at least one of the APIs calls for a transaction to be propagated to a destination using push-style propagation ("…propagate information…" Col. 15 Ln. 63 – 67).

28.   As to claim 36, Schaefer teaches interfaces according to claim 35, wherein at least one of the APIs calls for the output of the API calls for the transaction to be propagated to a destination using push-style propagation to be retrieved ("…propagate…" Col. 27 Ln. 64 – 67).

29.   As to claim 37, Schaefer teaches interfaces according to claim 31, wherein at

least one of the APIs is called when transaction propagation has been completed

("...CommitRequestDone method..." Col. 17 Ln. 1 – 3, "...Commit Complete

Indication..." Col. 18 Ln. 16 – 20, "...hptpx_commit_complete..." Col. 31 Ln. 20 – 35).

30.   As to claim 38, Schaefer teaches interfaces according to claim 31, wherein at

least one of the APIs is called when requested transaction propagation has failed

("...AbortRequest method..." Col. 18 Ln. 7 – 25).

31.   As to claim 40, Schaefer teaches an apparatus for implementing a transaction,

comprising: a kernel transaction object (TX) to represent a transaction and the TX being

accessible by at least one process participating in the transaction (Transaction Object

78 Col. 15 Ln. 15 – 33); a kernel resource manager object (RMO) to represent a

relationship between a TX associated with a the transaction manager and at least one

resource that participates in the transaction (Resource Manager Object 108 Col. 15 Ln.

51 – 62, Col. 16 Ln. 8 – 17), the resource being an entity capable of storing data in a

durable state (figure 5 "...CRM record..." Col. 22 Ln. 1 – 67); and a kernel enlistment

object (EN) to represent a relationship between a resource manager and the

transaction(Enlistment Object 80 Col. 16 LN. 54 – 67), wherein two-phase commit

processing is executed by calling APIs on the TX, the RMO, and the EN

("...ITransaction interface..." Col. 15 Ln. 27 – 33, IResourceManagerFactory

interface…" Col. 15 Ln. 42 – 62, "…ITransactionEnlistmentAsync interface…" Col. 16

Ln. 54 – 67).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

32.   Claims 4,16,17,20 and 26 are rejected under 35 U.S.C. 103(a) as being

unpatentable over U.S. Pat. No. 6,157,927 to Schaefer et al., in view of U.S. Pat.

No. 6,728,958 B1 to Klein et al.

33.   As to claim 4, Schaefer is silent with reference to interfaces according to claim 2,

wherein at least one of the APIs calls for the TX to transmit pre-prepare messages to

resource managers associated with a transaction.

Klein teaches to interfaces according to claim 2, wherein at least one of the APIs

calls for the TX to transmit pre-prepare messages to resource managers associated

with a transaction ("…pre-prepare notification…" Col. 2 Ln. 19 – 23, Ln. 40 – 44, Ln. 57

– 67, Col. 7 Ln. 37 – 39).

It would have been obvious to one of ordinary skill in the art at the time the

invention was made to modify the system of Schaefer with the teaching of Klein

because the teaching of Klein would improve the system of Schaefer by providing

resource managers with extra "pre-prepare" processing prior to the commencement of

commitment processing and supporting porting a foreign database system on the local

platform by writing to a file system (Klein Col. 7 Ln. 24 – 30).

34.   As to claim 16, Klein teaches interfaces according to claim 15, wherein the new

RMO is volatile ("...volatile resource manager (VRM) Col. 6 Ln. 63 – 67, Col. 7 Ln. 1 -

2).

35.   As to claim 17, Klein teaches interfaces according to claim 15, wherein the new

RMO is durable ("...recoverable resource manager..." Col. 6 Ln. 63 – 67).

36.   As to claim 20, Klein teaches interfaces according to claim 2, wherein at least

one of the APIs calls for the RMO to transmit information regarding the RMO to a

requestor (Col. 7 Ln. 1 – 23).

37.   As to claim 26, Klein teaches interfaces according to claim 25, wherein the at

least one of the APIs is to inform the TX that pre-preparing is complete ("...ready

signal..." Col. 8 Ln. 33 – 41).

38.   **Claims 13 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable
over U.S. Pat. No. 6,157,927 to Schaefer et al., in view of U.S. Pat. No. 6,101,527 to
Lejeune et al.**

39.   As to claim 13, Schaefer is silent with reference to interfaces according to claim
2, wherein at least one of the APIs calls for the TX to close.

Lejeune teaches interfaces according to claim 2, wherein at least one API calls
for TX to close ("...xa_close..." Col. 5 Ln. 40 – 42).

It would have been obvious to one of ordinary skill in the art at the time the
invention was made to modify the system of Schaefer with the teaching of Lejeune
because the teaching of Lejeune would improve the system of Schaefer by providing a
process for allowing disconnection from a resource manager (Lejeune Col. 5 Ln. 41 –
42).

40.   As to claim 19, Lejeune teaches interfaces according to claim 2, wherein at least
one of the APIs calls for the RMO to be destroyed ("...terminate..." Col. 16 Ln. 48 – 57).

Response to Arguments

Applicant's arguments filed 3/17/08 have been fully considered but they are not
persuasive.

Applicant argues in substance that (1) the Schaefer prior art does not teach or
disclose a transaction object (TX) accessible by a process participating in a transaction,

and (2) the Schaefer prior art does not teach or disclose a resource management object

(RMO) that represents a relationship between a transaction object (TX) of a transaction

manager and a resource.

The Examiner respectfully traverses Applicant's arguments:

As to point (1), the Schaefer prior art discloses a distributed transaction

processing systems. Specifically, the distributed transaction processing systems is

directed to methods for enabling a component in a first transaction processing

environment, such as, a Microsoft Transaction Server environment, to access a

resource on a remote server in another transaction processing environment that is

under the control of an XATMI-compliant transaction manager. When the component is

configured as requiring or supporting a transaction, a transaction object (Transaction

object 78) is created and the transaction object represents the transaction for which the

component is attempting to perform work. A GetTransaction method of a

IObjectContextTransaction interface of a context object of the component can be

invoked to obtain a reference (i.e., pointer) to the transaction object representing the

transaction for which the component is performing work. Once a pointer to the

Transaction object 78 is obtained, a GetTransactionInfo method of the **ITransaction**

interface of the Transaction object 78 can be invoked to obtain information about the

transaction. For example, this information contains a globally unique identifier (GUID)

that Microsoft Transaction Server (MTS) assigns to the transaction to identify it within

the MTS environment and therefore provides an application programming interface

(API) that allows for a transaction object to be accessible to a process participating in a transaction.

As to point (2), contrary to Applicant's assertion the Schaefer prior art does disclose a resource management object (RMO) that represents a relationship between a transaction object (TX) of a transaction manager and a resource. The Schaefer prior art discloses a distributed transaction coordinator (MS DTC 56) that controls the participation of Microsoft Transaction Server (MTS) components in transactions and coordinates transaction commitment. The MS DTC 56 functionally creates a proxy core object and the proxy core object exposes interfaces that provide services in a distributed transaction processing systems. One of the interfaces provided is IResourceManagerFactory interface and this interface includes a create method for creating a resource manager object (Resource Manager Object 108). The resource manager object represents an active connection between the resources associated with a resource manager and a transaction associated with the Ms DTC 56/Transaction Manager.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles E. Anya whose telephone number is 571-272-3757. The examiner can normally be reached on 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on 571-272-3756. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Meng-Ai An/
Supervisory Patent Examiner, Art Unit 2195

cea.